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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,299	02/13/2004	Andrew Kadatch	MS305998.1/MSFTP547US	7435
27195 7590 05/07/2007 AMIN. TUROCY & CALVIN, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114			EXAMINER TRAN, VINCENT HUY	
			ART UNIT 2115	PAPER NUMBER
			MAIL DATE 05/07/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/779,299

Applicant(s)

KADATCH ET AL.

Examiner

Vincent T. Tran

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6,8-11,13-16,18-21,23-26 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-11,13-16,18-21,23-26 and 28-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is responsive to the communication filed on 3/26/07
2. Claims 1, 3-6, 8-11, 13-16, 18-21, 23-26, 28-32 are pending for examination.
3. The text of those sections of Title 35, U.S. code not included in this action can be found in a prior Office action.

### ***Claim Objections***

4. Claims 5, 9, 15, 19, 29 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 1, 6, 21, 26, 31, 32 recite the limitation "from the group consisting". There is insufficient antecedent basis for this limitation in the claim.
7. The term "approximately" in claim 11, 16, 32 is a relative term which renders the claim indefinite. The term "approximately" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1, 3-5, 6, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubal U.S. Patent No. 6,976,196 in view of Bishop.

12. As per claim 1, Dubal teaches a performance monitoring system, comprising:  
a performance component [50 fig. 3] that initiates at least one thread involving at least one computing resource [col. 3 lines 44-50], the thread comprising at least one selected from a group consisting of a memory-intensive operation thread and a computationally intensive operation thread [col. 7 lines 17-20; col. 8 lines 5-38]; and

a monitoring component that obtains at least one performance parameter for computing resource derived, at least in part, from the thread initiated by the performance component [col. 1 lines 17-20; col. 8 lines 30-38].

Although Dubal teaches the performance component spawn a resource monitoring thread as a background task that is used to monitor system resource condition, Dubal does not teach the thread is a low priority thread.

Bishop teaches another method related to data processing system and more particularly to a monitor of a data processing system's resource utilization where these resources can give user of a data processing system key information on fine tuning the various system parameters to achieve a higher system performance. Specifically, Bishop teaches the resource utilization is measured by starting a thread and assigning the thread to the lowest priority level in the system.

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of Dubal with the assignment of low priority thread as taught by Bishop. The motivation for doing so would have been to prevent the higher priority thread from starving while the monitoring thread is running.

13. As per claim 3, Bishop discloses the computing resource comprising at least one selected from a group consisting of a CPU and a memory resource [col. 10 lines 51-51].

14. As per claim 4, Bishop discloses the performance parameter comprising at least one from the group consisting of available CPU processing time, available memory, and available CPUs [col. 10 lines 55-56].

15. As per claim 5, Bishop discloses a dynamically linked library comprising the system of claim 1 [SYSTRACE – col. 11 lines 1-14].

16. Claims 11, 13-16, 18, 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Keil et al. U.S. Patent No. 4,905,171 (“Keil”).

17. As per claim 11, Keil teaches a performance monitoring system [col. 1 lines 34-41], comprising:

a performance component [10 fig. 1] that initiates at least one high frequency interrupt involving at least one computing resources [col. 3 lines 19-29; fig. 7]; and

a monitoring component that obtains at least one performance parameter for the computing resource derived, at least in part, from the high frequency interrupt initiated by the performance component [fig. 5].

Keil does not explicitly teach the high frequency interrupt comprising an interrupt with a frequency of at least approximately 300 Hertz. However, Berc particularly teaches the sample rate should be fast enough to get good statistical sample but not too fast to become a burden on the processor. Therefore, it would have been obvious design consideration to one of ordinary skill in the art at the time the invention was made to have made the interrupt frequency of Keil as 300 Hertz since one would have expected applicant’s invention to perform equally well with either the fast interrupt frequency taught by Keil or the claimed 300 hertz because both interrupt frequency value perform the same function of attaining a good statistical sample to evaluate system performance.

18. As per claim 13, Keil teaches the computing resource comprising at least one selected from the group consisting of a CPU and a memory resource [claim 1].
19. As per claim 14, Keil teaches the performance parameter comprising at least one from the group consisting of available CPU processing time, available memory, and available CPUs [claim 2].
20. As per claim 15, Keil teaches a dynamically linked library [a subroutine see fig. 3].
21. As per claim 18, Keil teaches the entity employing the method of claim 16 comprising a computer [fig. 1].
22. As per claim 19, Keil teaches a method, therefore, Keil teaches discloses a computer readable medium to perform the method.
23. As per claim 20, see claim 18.
24. Claims 21, 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berc in view of Bishop.
25. As per claim 21, Berc discloses a performance monitoring system, comprising:

a performance component [231-233 fig. 2] that initiates at least one high frequency interrupt involving at least one computing resources [col. 4 lines 44-47; col. 1 lines 50-56]; and

a monitoring component [230 fig. 2] that obtains at least one performance parameter for the computing resource derived, at least in part, from the high frequency interrupt initiated by the performance component [col. 2 lines 2-7; claim 1].

Berc does not teach initiates at least one low priority thread, wherein the low priority thread comprising at least one selected from a group consisting of a memory-intensive operation thread and a computationally intensive operation thread.

Dubal and Bishop teach another method directed to the monitoring and capturing of data processing system's resource utilization. Specifically, Dubal and Bishop teach a performance component that initiates at least one low priority thread to obtain at least one performance parameter for computing resource wherein the low priority thread comprising at least one selected from a group consisting of a memory-intensive operation thread and a computationally intensive operation thread[see discussion in claim 1].

At time of the invention was made, it would have been obvious to one of ordinary skill in the art they have modified the system of Berc with the initiates of a low priority thread of Dubal and Bishop in order to accurately measure the availability of the CPU during idle time.

26. As per claim 23, see claim 12.

27. As per claim 24, see claim 13.

28. As per claim 25, see claim 14.

29. As per claim 28, see claim 18.



30. As per claim 29, see claim 19.

31. As per claim 30, see claim 30.

32. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kiel in view of Dubal and Bishop.

33. As per claim 32, Kiel teaches a data packet transmitted between two or more computer components [54, 57 fig. 2] that facilitates computing performance, the data packet comprising, at least in part, information relating to a computing performance system that utilizes, at least in part, at least one high frequency interrupt to determined availability of computing resources, the high frequency interrupt comprising an interrupt with a frequency of at least approximately 300 Hertz [see discussion in claim 11].

Keil does not teach one low priority thread with memory and computationally intensive operation.

Dubal and Bishop teach one low priority thread with memory and computationally intensive operations [see discussion in claim 1].

At time of the invention was made, it would have been obvious to one of ordinary skill in the art the have modified the system of Berc with the initiates of a low priority thread of Dubal and Bishop in order to accurate measure the availability of the CPU during idle time.

34. Claims 1, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berry et al. U.S. Patent No. 5,872,913 ("Berry") in view of Dubal.

35. As per claim 1, Berry teaches a well know performance monitoring system, comprising:

a performance component that initiates at least one low priority thread involving at least one computing resource; and

a monitoring component that obtains at least one performance parameter for computing resource derived, at least in part, from the low priority thread initiated by the performance component [col. 1 line 46 to col. 2 lines 8].

Berry does not teach the low priority thread comprising at least one selected from a group consisting of a memory-intensive operation thread and a computationally intensive operation thread.

Dubal teaches a resource monitoring thread which spawned as a back ground process to monitor system resource condition. Specifically, Dubal teaches the thread comprising at least one selected for a group consisting of a memory-intensive operation thread and a computationally intensive operation thread [see discussion in claim 1].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of Berry with one low priority thread with memory and computationally intensive operations. The motivation for doing so would have been to provide the system the ability not only to monitor the CPU processing time but also the level of utilization of other component in the system.

36. Claims 11, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berry.

37. As per claim 11, Berry teaches a well know method for facilitating computer system performance, comprising:

executing at least one high frequency interrupt involving at least one computing resource, the high frequency interrupt comprising an interrupt with a frequency of at least approximately 300 Hertz [designer choice]; and

obtaining at least one performance parameter for computing resource derived, at least in part, from execution of the high frequency interrupt [col. 2 lines 9-28].

### ***Conclusion***

**Examiner's note:**

Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

**Prior Art not relied upon:**

Please refer to the references listed in attached PTO-892, which, are not relied upon for claim rejection since these references are relevant to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent T. Tran whose telephone number is (571) 272-7210. The examiner can normally be reached on 7:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas c. Lee can be reached on (571)272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vincent Tran



**CHUN CAO**  
**PRIMARY EXAMINER**